REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

By the above amendments, claims 1, 4, 10-14, 16, 19 and 34 have been amended for readability and/or clarification purposes.

The objection to claims 1, 4 and 11 is moot in view of the above amendments to such claims.

Claims 1-10, 12-14, 16, 17, 19-26, 28, 32, 34 and 35 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. This rejection is rendered moot in part, in view of the above amendments to claims 1, 10, 12-14, 16, 19 and 34. With respect to the rejection of claim 12 for reciting the term "different cuvettes", Applicants note that such claim does not recite the definite article "the" prior to such term. With respect to the term "substantially" recited in claim 32, Applicants note, for example, that such term allows for possible insubstantial variances between the length of the sample and the scope of detection. Accordingly, for at least the above reasons, withdrawal of the above §112 rejection is respectfully requested.

Claims 1-10, 17, 21-26 and 28 stand rejected under 35 U.S.C. §101. Withdrawal of this rejection is respectfully requested for at least the following reasons.

The machine-or-transformation test being relied on by the Examiner is not the sole test for patent-eligibility of processes under 35 U.S.C. §101. See *Bilski v. Kappos*, 561 U.S. ___ (2010), 2010 U.S. LEXIS 5521 (June 28, 2010). As is apparent from the plain language of independent claim 1, such claim is not merely

directed to laws of nature, natural phenomena or abstract ideas. As such, claim 1 is fully compliant with the provisions of 35 U.S.C. §101. Accordingly, for at least the above reasons, withdrawal of the §101 rejection is respectfully requested.

Claims 11, 13 and 14 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,638,172 (*Alsmeyer et al*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Alsmeyer et al does not disclose each feature recited in independent claim 11, and as such fails to constitute an anticipation of such claim. For example, *Alsmeyer et al* does not disclose a spectrometric measurement device which measures radiation intensity scattered or transmitted by a dispersion sample over a partial or entire length of the sample, simultaneously for multiple positions of the sample, as recited in claim 1. Nor does *Alsmeyer et al* disclose that the spectrometric measurement device provides a radiation intensity measurement for each of the multiple positions at which a measurement is taken, as recited in claim 1.

In this regard, the Patent Office has relied on *Alsmeyer et al* for disclosing "simultaneously irradiating . . . a reference material and a chemical composition". See col. 3, lines 34-37 and Figure 2. The claimed device, however, measures radiation intensity simultaneously for multiple positions of the sample. That is, the multiple positions at which radiation intensity measurements are taken **are of the same sample**. *Alsmeyer et al* discloses the simultaneous measurement of two separate samples, i.e., a reference material and a chemical composition.

The Patent Office has also relied on *Alsmeyer et al* for disclosing "simultaneously acquiring at more than one wavelength convolved Raman spectra of the reference material and the chemical composition". See col. 3, lines 40-43. Such

disclosure of *Alsmeyer et al* pertains to simultaneously acquiring at more than one **wavelength** convolved Raman spectra. Such disclosure does not relate to the measurement of radiation intensity simultaneously for multiple **positions of the sample**. Nor is there any disclosure that such device provides a radiation intensity measurement for each of the multiple positions at which a measurement is taken.

Quite clearly, *Alsmeyer et al* fails to constitute an anticipation of independent claim 11. Accordingly, withdrawal of the above §102(b) rejection is respectfully requested.

Claims 1, 2 and 17 stand rejected under 35 U.S.C. §103(a) as being obvious over *Alsmeyer et al*, in view of U.S. Patent Application Publication No. 2005/0275837 (*Zhang et al*) and U.S. Patent No. 5,095,451 (*Allen*). Claim 15 and 16 stand rejected under 35 U.S.C. §103(a) as being obvious over *Alsmeyer et al*, in view of *Allen*. Claim 29-33 stand rejected under 35 U.S.C. §103(a) as being obvious over *Alsmeyer et al*, in view of *Zhang et al*. Claim 19 stands rejected under 35 U.S.C. §103(a) as being obvious over *Alsmeyer et al*, in view of *Zhang et al*. Withdrawal of these rejections is respectfully requested for at least the following reasons.

Alsmeyer et al does not disclose or suggest each feature recited in independent claim 1. For example, *Alsmeyer et al* does not disclose or suggest repeatedly determining and recording momentary transmission values $I_T(t, r)$, and optionally scattering values $I_S(t, r)$, characterizing a current segregation status of the sample using waves radiated with intensity values $I_o(t, r)$ as a function of a position r within the sample at a time t, for one or more wavelengths over at least a partial section of the sample, simultaneously for multiple positions r, as recited in claim 1.

According to claim 1, transmission values $I_T(t, r)$ are repeatedly determined and recorded, simultaneously for multiple positions r of the sample. As noted previously, *Alsmeyer et al*'s disclosure, "simultaneously acquiring at more than one wavelength convolved Raman spectra of the reference material and the chemical composition", pertains to simultaneous acquisition at more than one **wavelength**. Such disclosure does not relate to the determination and recording of transmission values simultaneously for **multiple positions r of the sample**.

The Patent Office has also relied on *Alsmeyer et al*'s disclosure, "a sample contained in a tube is irradiated by radiation from a laser along the axis of the tube." See Official Action at page 9 and *Alsmeyer et al* at col. 5, lines 20-22. Such disclosure mentions only one location at which irradiation is taking place, i.e., along the axis of the tube. There is no mention or suggestion that transmission values $I_T(t, r)$ are repeatedly determined and recorded, **simultaneously for multiple positions r**. For each of such multiple positions, a transmission value $I_T(t, r)$ is determined and recorded. *Alsmeyer et al* clearly has no disclosure or suggestion of such feature.

Furthermore, *Alsmeyer et al* does not disclose or suggest each feature recited in independent claim 29. For example, *Alsmeyer et al* does not disclose or suggest detecting transmission values $I_T(t, r)$ and/or scattering values $I_S(t, r)$ of the sample, simultaneously for multiple positions r. For each of such multiple positions at which detection occurs, a transmission and/or scattering value is detected. *Alsmeyer et al* clearly has no disclosure or suggestion of such feature. As noted above, *Alsmeyer et al* discloses simultaneous acquisition at more than one wavelength, not at multiple positions r. Further, *Alsmeyer et al* mentions only one location at which irradiation is taking place, i.e., along the axis of the tube, and fails to disclose or suggest detecting

transmission values $I_T(t, r)$ and/or scattering values $I_S(t, r)$ of the sample, simultaneously for multiple positions r.

The secondary applied documents (i.e., *Zhang et al*, *Allen* and U.S. Patent No. 3,997,845 to *Wegstedt*) fail to cure the above-described deficiencies of *Alsmeyer et al*. In this regard, the Patent Office has relied on *Zhang et al* for teaching an analyte segregation and testing method. *Allen* has been relied on for disclosing calculating segregation speeds for any constant extinction values. *Wegstedt* has been relied on for disclosing that "extinction profiles are the log of a ratio the radiation leaving the sample . . . and the intensity of the radiation entering the sample." See Official Action at page 10. Quite clearly, even if the secondary applied documents would have been combined with *Alsmeyer et al* in the manner suggested by the Patent Office, the resulting combination nevertheless fails to cure the above-described deficiencies of *Alsmeyer et al* with respect to independent claims 1, 11 and 29.

For at least the above reasons, it is apparent that independent claims 1, 11 and 29 are non-obvious over the applied documents. Accordingly, withdrawal of the §103(a) rejections is respectfully requested.

The dependent claims are allowable at least by virtue of their direct or indirect dependence from one of the independent claims. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: August 16, 2010 By: _____

Roger H. Lee
Registration No. 46317

Customer No. 21839
703 836 6620